

CLAIMS

1. Device (1) for the preparation of data (21) to be sent in a
5 continuous stream to at least one receiver (R_i) via a communication network
(5), said device (1) comprising:

- means of obtainment (11) of said data (21) originating from a database (2), said database (2) containing at least two data stream entities (E_j) for data associated respectively with different transmission throughputs
10 (24),
 - means of transfer (12) of said data obtained to a system (3) for sending said data as a continuous stream over said network (5),
 - means of connection (13) of said means of obtainment (11) to one of said stream entities (E_j) of the database (2),
- 15 - and means of switching (14) of the means of connection (13) from one of said entities to another of said entities,

characterized in that:

- 20 - said preparation device (1) comprises means of regular addition (15) to said data (21) transferred to the sending system (3), of error correction codes (22) so as to form an augmented data stream (DATA),
 - said means of switching (14) being designed to switch the means of connection (13) from a first of said entities (E₁), associated with a first sending throughput, to a second of said entities (E₂), associated with a second sending throughput greater than said first sending throughput, when the stream (DATA) of said data (21) transferred augmented with said added error correction codes (22) reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity (E₂), and

- said means of addition (15) being designed to reinitialize the addition of said codes (22) to said initial input upon the switching of said first entity (E1) to said second entity (E2).

5 2. Preparation device (1) according to Claim 1, characterized in that it comprises means of automatic throughput regulation (16) capable of reducing the quantity of said codes added (22) upon detection of risk of congestion.

10 3. Preparation device (1) according to Claim 2, characterized in that said means of automatic throughput regulation (16) are designed to reinitialize to zero the addition of said codes (22) upon detection of risk of congestion.

15 4. Preparation device (1) according to any one of the preceding claims, characterized in that said means of connection (13) are designed to select one of said entities (Ej) as a function of a throughput preset (25) modifiable over time and in that said means of addition (15) are designed to be activated when said selected entity is associated with a sending 20 throughput greater than the sending throughput of another of said entities that is currently sending.

25 5. Preparation device (1) according to any one of the preceding claims, characterized in that said means of obtainment (11) are capable of obtaining at least one of said entities (Ej) by superimposing on another of said entities at least one data stream layer available in the database (2).

30 6. Preparation device (1) according to any one of the preceding claims, characterized in that said means of addition (15) are designed such that each increment of said codes (22) added to the transferred data (21) causes an increase in the sending throughput of said augmented data

stream (DATA) which is less than a third of the difference between the second sending throughput and the first sending throughput respectively associated with the second entity (E2) and with the first entity (E1).

5 **7. Preparation device (1)** according to any one of the preceding claims, characterized in that said means of switching (14) are capable of switching the means of connection (13) of one of the entities currently sending, associated with a nominal current sending throughput to another of the entities, associated with a nominal fallback sending throughput that is
10 lower than the current nominal throughput, upon detection of risk of congestion.

8. Server (10) of data, preferably of video data, characterized in that it comprises a data preparation device (1) in accordance with any one of
15 Claims 1 to 7.

9. Server (10) of data according to Claim 8, characterized in that it is designed to send data over an IP network, in accordance with the RTP and UDP protocols utilized jointly.

20 **10. Method for the preparation of data (21)** to be sent in a continuous stream to at least one receiver (R_i) via a communication network (5), according to which:

25 - said data (21) originating from a database (2) are obtained, said database (2) containing at least two data stream entities (E_j) for data associated respectively with different transmission throughputs (24), by extracting said data (21) from one of said stream entities (E_j),
- said data (21) obtained are transferred to a system (3) sending said data as a continuous stream over said network (5),
30 - and there is a switch from one of said entities to another of said entities to obtain said data (21),

characterized in that:

- error correction codes (22) are added regularly to said data (21) transferred to the sending system (3), so as to form an augmented data stream (DATA),
 - there is a switch from a first of said entities (E1), associated with a first sending throughput, to a second of said entities (E2), associated with a second sending throughput greater than the first sending throughput, when the stream (DATA) of said data (21) transferred augmented with said added error correction codes (22) reaches a threshold throughput equal to the sum of the second sending throughput and of an additional throughput associated with an initial input of error correction codes for said second entity (E2), and
 - the addition of said codes (22) to said initial input is reinitialized when switching from said first entity (E1) to said second entity (E2),

said preparation method being preferably designed to be implemented by means of a device (1) for the preparation of data (21) to be sent in accordance with any one of Claims 1 to 7.

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11. Computer program product comprising program code instructions for the execution of the steps of the method according to Claim 10, when said program is executed on a computer.